



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,752	07/07/2005	Georg Werner Reppel	47192/312177	6817
23370 7590 02/19/2008 JOHN S. PRATT, ESQ KILPATRICK STOCKTON, LLP 1100 PEACHTREE STREET ATLANTA, GA 30309				
EXAMINER SHEEHAN, JOHN P				
ART UNIT 1793		PAPER NUMBER		
MAIL DATE 02/19/2008		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,752

Applicant(s)

REPPPEL, GEORG WERNER

Examiner

John P. Sheehan

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF 298)
Paper No(s)/Mail Date 5/18/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informalities:
 - I. The specification at page 1, the first paragraph and page 2, lines 1 and 2 refers to specific claim numbers. However, it is not proper to refer to the claims in the specification in that the claims may be amended and/or renumbered during prosecution.Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1 to 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

I. Claims 1 and 2, line 7, recites, "to create a hybrid". First, it is questioned whether "hybrid" should be hydride. If this is not the case and applicants' intention is "hybrid" then the claims are indefinite in that it is not clear "hybrid" means in the context of the claims. For example, "hybrid" of what?

II. In claim 13, the last 2 lines, the phrase, "the powders" lack an antecedent.

III. Each of claims 1 and 2, recites a list, each member of this list appears to be a process step and is prefaced by "-", for example see claim 1, lines 3, 5, 7, 10 and 13. The relationship between the members of these lists is not clear. For example, when in the claimed process is the, "a dehydrogenation process with a reverse phase transition (HDDR method)" performed?

IV. In lines 3 and 4 and the last two lines of each of claims 1 and 2, the "starting material" of the claimed process is defined in different terms. In view of this, it is not clear exactly what the starting material is in the claimed process. Is the starting material the material defined in lines 3 and 4 or is the starting material the material defined in the last 2 lines of each of claims 1 and 2?

V. In like manner, in each of claims 6 and 7 the starting material is again defined in different terms than previously used in the claims. Does each of claims 6 and 7 define a different starting material than is defined in claim 1? This confusion is, in part, caused by the fact that in each of claims 6 and 7, line 2, the phrase "a starting material" is recited rather than the term --the starting material--.

Claim Interpretation

5. Claims 1 and 2 each recite the phrase, “a starting material based on an SE-TM-B alloy” (claims 1 and 2, line 3, emphasis added by the Examiner). In view of the use of the term “based on”, the phrase, “a starting material based on an SE-TM-B alloy” is not limited to an alloy consisting of rare earth-transition metal-boron but rather has been interpreted to mean any rare earth-transition metal-boron alloy containing any additional elements in any amount.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 to 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeshita et al. (Takeshita '372, US Patent No. 5,110374, cited by the Examiner) in view of either Kim (Kim '020, US Patent No. 5,091,020, cited in the IDS submitted May 18, 2005) or Kaneko et al. (Kaneko '861, US Patent No. 6,149861, cited by the Examiner).

Takeshita '372 teaches an HDDR process that is encompassed by the HDDR process recited in the instant claims (page 10, lines 24 to 43). Takeshita teaches that the HDDR process produces an anisotropic rare earth-transition metal-boron alloy powder having a recrystallized grain structure containing the $R_2Fe_{14}B$ phase (column 3,

Art Unit: 1793

lines 55 to 60) and that this rare earth-transition metal-boron alloy powder is used to make bonded magnets (column 3, lines 48 to 51). Takeshita '372 teaches that the $R_2Fe_{14}B$ phase occupies no less than 50 volume % of the rare earth-transition metal-boron alloy (column 6, lines 3 to 10) as recited in claim 6. Takeshita '372 teaches at least one specific example of the HDDR process having process steps that are encompassed by the claims (column 14, Example 1). Takeshita '372 teaches that the disclosed HDDR process is applicable to rare earth-transition metal-boron alloys containing Fe, Ni or Co as recited in claim 4 and C, O, N and S as recited in claims 5 (column 9, lines 14 to 36). Takeshita '372 teaches that the starting material for the HDDR process is a rare earth-transition metal-boron alloy containing the $R_2Fe_{14}B$ structure (column 6, lines 19 to 36). Thus, the process steps recited in applicants' claims are known.

Kim '020 and Kaneko '861 each teach the concept of recycling scrap and or scrap sintered $R_2Fe_{14}B$ rare earth-transition metal-boron alloy (Abstract of each) and that the recycled rare earth-transition metal-boron alloy is used in place of new rare earth-transition metal-boron alloy powder (Kim '020, column 1, lines 60 to 64 and Kaneko '861, column 2, lines 14 to 28) as recited in claims 1 and 2. Kaneko '861 also teaches that the concept of recycling rare earth-transition metal-boron alloy is motivated by economics and environmental concerns (column 2, lines 14 to 28). Thus, the concept of recycling rare earth-transition metal-boron alloy is well known.

The claims and Takeshita '372 differ in that Takeshita '372 teaches the use of new rare earth-transition metal-boron alloy in the disclosed HDDR process and not scrap rare earth-transition metal-boron alloy as recited in the claims.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because such a person would have been motivated to substitute scrap rare earth-transition metal-boron alloy for the new rare earth-transition metal-boron alloy as the starting material in Takeshita '372's process for economic and environmental reasons as taught by Kaneko '861. The results of such a substitution are reasonably predictable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571) 272-1249. The examiner can normally be reached on T-F (7:30-5:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John P. Sheehan/

Primary Examiner, Art Unit 1793